Quality Checkers Only way to fulfill your dreams	XI-SCI : Chemistry Basic Analytical Techniques,	**DATE:** **TIME: 1 hour 30 minutes** **MARKS: 25** SEAT NO:

Note:-

1. All Questions are compulsory.
2. Numbers on the right indicate full marks.

Section A

Q.1 Select and write the correct answer. **(4)**

1. Which of the following is not the criterion of purity of a substance?

   A) Solubility B) Melting point
   C) Boiling point D) Density

2. Fractionating columns are used for separating

   A) Low boiling liquids B) Miscible liquids
   C) Liquids with large difference in boiling points D) Liquids with small difference in boiling point

3. Analysis involving more than 0.1 g of compound is _____ .

   A) Gravimetric analysis B) Macro analysis
   C) Volumetric analysis D) Semi micro analysis

4. Which of the below stated compound is purified by sublimation?

   A) Naphthalene B) Benzoic acid
   C) Camphor D) All

Q.2 Answer the following. **(3)**

1. Give two uses of distillation.
2. Which of the following techniques is used for purification of solid organic compounds?
   (a) Crystallisation (b) Distillation
3. What is Mother liquor?

Section B
Attempt any Four

Q.3 Mention the major steps involved in crystallisation technique. **(2)**

Q.4 Explain the principle involved in chromatography. **(2)**

Q.5 How do you visualize colourless compounds after separation in TLC and Paper chromatography? **(2)**

Q.6 How do you prepare a saturated solution? **(2)**

Q.7 Why should spotting of mixture be done above the level of mobile phase? **(2)**

Q.8 What is R_f value w.r.t. chromatography? **(2)**

Section C
Attempt any Two

Q.9 Write a note of TLC with a neat labelled diagram. **(3)**

Q.10 List the properties of solvents which make them suitable for crystallization. **(3)**

Q.11 If a compound travels 2.1 cm and the solvent front travels 2.8 cm. What will be the retention factor? **(3)**

Section D
Attempt any One

Q.12 Name the different types of chromatography and explain the principles underlying them. **(4)**

Q.13 How retention factor is calculated? Explain with an example. **(4)**